A CORRELATION OF PREJUDICE WITH CREATIVITY

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Abstract

The present study was designed to investigate the relationship between prejudice, as measured by the California F Scale, and creativity, as defined by the Torrance Verbal Test of Creative Thinking. The Torrance Verbal Test of Creative Thinking was administered to a group of fifty subjects during a sixty minute session. The same group of subjects was administered the California F Scale the following day during the same time period and in the same setting. It was predicted that there would be a positive correlation between the subject's degree of creativity and the amount of expressed prejudiced beliefs, i.e., the more creative subject would tend to be less prejudice and the less creative subject would tend to be more prejudiced.

The individual subtests, as well as the total creativity score, were correlated with the results obtained on the California F Scale. The Pearson Product-Moment correlative technique was utilized to correlate the total creativity score on the Torrance Verbal Test of Creative Thinking with the results obtained on the California F Scale. In addition, the three subtests, fluency, flexibility, and originality, of the creativity measure were independently assessed in order to determine their degree of correlation with prejudice. The results of the correlation were as follows: (1) no significant correlation of total creativity scores with prejudice scores, (2) no significant correlation between fluency and prejudice, (3) no significant correlation between flexibility and prejudice, (4) no significant correlation of originality with prejudice.

Table of Contents

Introduction

The purpose of the present study was to assess the linear relationship between prejudice and creativity. More specifically, the study was conducted to determine if the quality of prejudice is a correlative function of the quality of creativity. Further, the study originated as a result of the author's realization that articles independent of each other on creativity and on prejudice indicated quite different reactions of subjects to environmental and internal stimuli. No previous study has considered both variables concurrently. If prejudice is related to creativity, it can be extrapolated that families who rear less prejudiced children will in turn rear more creative offspring. The present study was designed to make such an analysis. From a strict behavioral standpoint, if the quality of prejudice is harmful to creativity, it should be recognized and approached not only in the home but also in educational institutions.

In review of studies dealing exclusively with either prejudice or with creativity, the more creative individual appears to have qualities inconsistent with those exhibited by the more prejudiced person. For example, Barron (1952, 1953, 1954, 1955, 1956, 1958, 1968) suggested disorderliness and intolerance for the chaotic, impulsivity, skepticism, daring, and independence of judgment as possible characteristics of a creative person. In comparison, the prejudiced individual was often described as rigid and concrete. Rokeach (1948) suggested that this rigidity is indicated in both social and non-social problems.
In contrast to the ethnocentric belief that there is only one right way to do anything, as was suggested by James G. Martin (1964), Guilford (1950) contended that more creative individuals have a fluency of ideas, flexibility of mind, and ease of changing set. Studies have suggested that the

creative person is able to cope with ambiguity; however, it appears that the prejudiced individual is intolerant of ambiguity. The following studies illustrate this contradictory tendency. Biller and Singer (1969) found that "boys with mixed sex patterns (inconsistent orientation and preference) were significantly higher on a creativity measure than boys with consistent sex-role patterns." Conversely, Block and Biller (1951) supported Frenkel-Brunswik's (1949) view that intolerance of ambiguity and ethnocentrism are intrinsically related. Another conflicting aspect of prejudice and creativity appears to be the flexibility of the creative person and the rigidity of the prejudiced individual. For instance, Fleming and Weintraub (1962) found a negative relationship between scores on certain creative thinking tests (a battery of verbal and nonverbal creative thinking tasks assembled from the Torrance compendium) and rigidity. An example of the prejudiced characteristic of rigidity is a study by Rokeach (1949) indicating that highly prejudiced adults and children were significantly more rigid and concrete than low-prejudiced adults and children.

For the present study, it was assumed that the prejudiced personality incorporates the qualities of conventionalism, authoritarian submission, authoritarian aggression, anti-intraception, superstition, and stereotypy, power and "toughness", destruction and cynicism, projectivity, and exaggerated concern with sexual "goings-on" as set forth by the California F Scale. Torrance (1966) defined creativity as "a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing disharmonies, and so on: identifying the difficulty; searching for solutions, making guesses, or formulating hypotheses about the deficiencies; testing and retesting these hypotheses and possibly modifying and retesting them; and finally communicating the results". Torrance's definition was accepted and was utilized here.

It was expected that the high prejudiced individual would tend to show low creativity and conversely that the low prejudiced individual would tend to show high creativity. This hypothesis was formulated on an a priori basis, and its verification was the motivation for this experiment.

Method

Subjects

The subjects were fifty eighth grade boys, between the ages of 13 and 14 years. All subjects were enrolled in a male physical education class at Winecoff School, Concord, North Carolina. According to the Employment Security Commission, the median work wage per week in Cabarrus County, where Concord is situated, is $125.00. As measured by the Otis Mental Measurement, most of the subjects were functioning within the dull normal to very bright range of intelligence. Only one subject had been judged as below dull normal in intelligence. None of the subjects was familiar with the contents of the Torrance Verbal Test of Creative Thinking or with the California F Scale.

Apparatus

The present study utilized the Torrance Verbal Test of Creative Thinking to determine creativity. Although this was a tedious and time consuming test to grade, it was deemed the most appropriate since it appeared to be one of the most widely researched in this particular area, and because it was quite often employed in literature dealing with creativity. It also used some testing techniques similar to those of other researchers in creativity such as Guilford and Burkhart as well as expanding into areas not specifically measured by those individuals. According to Torrance (1968), the Torrance Verbal Test of Creative Thinking consists of seven tasks which require the following: "asking questions about the causes of the event pictured, making guesses about the possible consequences of the event, producing ideas for improving a toy so that it would be more fun for children to play with, thinking of unusual uses of tin cans or cardboard boxes, asking provocative questions, and thinking of varied possible ramifications of an improbable event." From these seven tasks scores for fluency, flexibility, and originality are extracted. Fluency is

defined as the number of relevant responses given; flexibility is the number of different categories of response; originality is a sum of credits where some routine responses count zero, less common responses get a score of one, and responses too infrequent to be on the list in the manual get a credit of two.

Previous studies have utilized various methods of measuring prejudice, such as the 10-item California Ethnocentrism Scale used in a study by Rokeach (1949, 1951), and the Berkeley Ethnocentrism Scale used by Block (1951). Since verbal ethnic tolerance is a popular trend today, it was deemed necessary to employ a less offensive instrument for detecting prejudice. The California F Scale was utilized here since it is a rather subtle instrument for measuring prejudice. Rokeach (1960) contended that the California F Scale was designed to use as an indirect measure of prejudice without mentioning the names of any specific minority group, and that "those who score high on the F Scale also tend to score high on measures of ethnocentrism..." The California F Scale utilizes twenty-nine statements to assess amount of incorporation of prejudice attitude.

Procedure

On June 8, 1974, fifty male subjects were gathered during a fifth period class (1:00 to 2:00) for sixty minutes. The students were tested in a large classroom which was well ventilated and well lighted. Pencils and test booklets were distributed to the subjects who were seated at individual desks. Directions for the administration of the Torrance Verbal Test of Creative Thinking were followed and were read verbatim from the directions manual. The subjects were instructed to raise their hands if there were any questions, and the directions would be individually re-emphasized or clarified.

Two individuals received brief verbal clarification and subsequently completed their test with no further complication.

On June 9, 1974, the California F Scale was given in the same setting and at the same time period to the original fifty subjects. Testing lasted for thirty minutes. The following instructions were read aloud to the subjects:

> "The following statements refer to opinions regarding a number of social groups and issues, about which some people agree and others disagree. Please mark each statement in the left-hand margin according to your agreement or disagreement, as follows:
>
> +1: slight support, agreement -1: slight opposition, disagreement
> +2: moderate support, agreement -2: moderate opposition, disagreement
> +3: strong support, agreement -3: strong opposition, disagreement

The California F Scale was scored independently by a clinical psychologist who tabulated the results by adding the + and the - marks which indicated the subjects' amount of agreement or disagreement with statements on the test. These results were kept from the experimenter so that a double blind analysis could be carried out.

The Torrance Verbal Test of Creative Thinking was scored with strict adherence to the scoring guide in the director's manual. The seven tasks were scored for fluency and originality. The six designated activities were scored for flexibility. The total creativity score was obtained by adding the scores obtained for fluency, flexibility, and originality.

Results

The Pearson Product-Moment correlative technique was used to compare the total creativity score, as well as the individual subcategories of fluency, flexibility and originality on the Torrance Verbal Test of Creative Thinking with the obtained scores on prejudice from the California F Scale. Although widely used, the California F Scale and the Torrance Verbal Test of Creative Thinking have not been standardized as have I.Q. evaluations. Therefore, individual scores could not be calculated as to their position on a curve of normal distribution. The possible range of scores on the California F Scale is 29-203. In the present study the scores ranged from 85-166. The mean score was 130.27. The total prejudice score was 6,527. The prejudice score was compared to total creativity as well as to each of the subcategories of creativity, which were fluency, flexibility, and originality. The total creativity scores ranged from 21 to 216.

The results of the analysis indicated the following: (1) no significant correlation of fluency scores with obtained prejudice scores (raw score: 2591--fluency; r=.099), (2) no significant correlation of flexibility scores with prejudice scores (raw score: 1379--flexibility; r=.027), (3) no significant correlation was indicated in the comparison of originality scores with prejudice scores (raw score: 1284--originality; r=.078), (4) no significant correlation was obtained for total creativity scores for this group of subjects with prejudice scores (raw score: 5252--total creativity; r=.079).

This study was the first attempt to correlate results on the Torrance Verbal Test of Creative Thinking with the California F Scale. Therefore, comparison with previous studies was impossible. One indirect correlation may be suggested

between the subcategories of fluency and flexibility and an earlier study (Fleming and Weintraub, 1962). No significant correlation was found when comparing the subcategories of fluency and flexibility with the scores for the incorporation of prejudiced beliefs. The test results seem to be commencerate with Fleming and Weintraub's study where they found a negative relationship between scores on certain creative thinking tests (a battery of verbal and nonverbal creative thinking tasks by Torrance) and rigidity.

TABLE 1

PEARSON PRODUCT-MOMENT CORRELATION OF PREJUDICE (CALIFORNIA F SCALE) WITH THE FOLLOWING MEASURES (TORRANCE VERBAL TEST OF CREATIVE THINKING)

MEASURE	RHO	SIGNIFICANCE
Flexibility	.027	Less than .05
Originality	.078	Less than .05
Fluency	.099	Less than .05
Total Creativity	.079	Less than .05

Discussion

It was expected on an a priori basis that those subjects obtaining higher scores on the Torrance Verbal Test of Creative Thinking would subsequently score low on the California F Scale. It was also anticipated that those subjects who scored lower on the Torrance Verbal Test of Creative Thinking would score higher on the California F Scale. The findings of this experiment did not confirm those expectations, however, since there was no significant statistical correlation between the results of the two tests.

The experimenter chose the .05 level of significance as the generally accepted cut-off level of statistical significance. Since that level was not reached statistically the general hypotheses that high creativity is positively correlated with low prejudice could not be substantiated. A. F. Osborn (1952) quoted Henry J. Taylor as having said "imagination lit every lamp in this country, produced every article we use, built every church, made every discovery, performed every act of kindness and progress, created more and better things for more people. It is the priceless ingredient for a better day." Assuming that Taylor's statement is correct, it should be beneficial to control for any variable which could possibly limit creative development. The quality of creativity is complex and is affected by numerous variables. According to the results of this study, a score indicating high prejudice did not necessarily reflect a marked deficit in creativity. Therefore, it should not be inferred that a non-prejudiced person is more creative than a prejudiced individual. If future studies do indeed reveal more strongly that creativity is hampered by the acceptance of prejudiced beliefs, the social factors which encourage these beliefs may need alteration. For example, the method of teaching might be changed to a more open approach,

allowing for more imaginative responses from students. Ralph L. Rosnow (1972) stated that "by the time a child is four years old, he recognizes the distinction between black and white." He further contends that "prejudice is an attitude, a learned predisposition..." and "the passage of time tends to reinforce a child's racial and ethnic sterotypes". Kenneth Clark (1963) asserted that "some children as young as three years of age begin to express racial and religious attitudes similar to those held by adults in their society". Taking this information as factual, it should also be helpful if parents were aware of the child's development to insure that the youngster is not overly disposed to prejudiced dogma.

The application and interpretation of this study's test results are necessarily limited to the specific group tested. All eighth grade males were used to control for the variables of sex and age. Since a linear relationship was being studied, it was not considered necessary to employ extremes of either prejudice or creativity. However, a future study could be designed utilizing subjects chosen specifically because of their extreme creativity or lack of creativity and because of their extreme prejudice or lack of prejudice and matched for intelligence, which could possibly better support the original hypotheses. In addition, investigating such variables as different age levels, number of subjects, socioeconomic backgrounds, different sexes, and racial backgrounds in relationship to the proposed hypotheses could produce quite diverse results.

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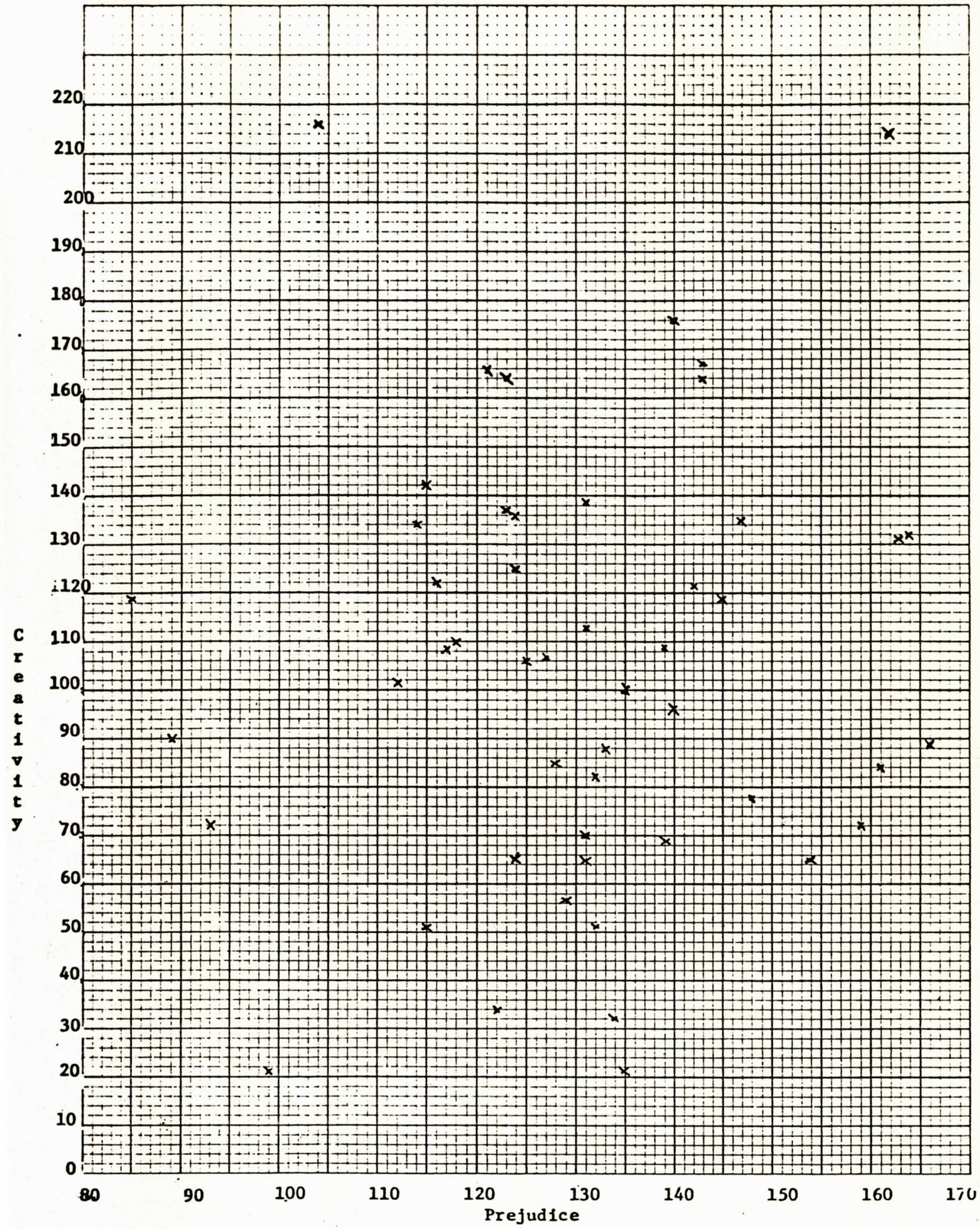
APPENDICES

Appendix A

Scattergram of Total Creativity Score by Prejudice



Appendix B

BASIC DATA

Subject	I.Q.	Fluency	Flexibility	Originality	Total Creativity	Prejudice
1	90	37	12	16	65	124
2	90	9	7	5	21	135
3	92	33	19	20	70	131
4	94	32	15	18	65	131
5	101	42	25	11	78	148
6	110	57	34	43	134	114
7	95	11	7	4	22	99
8	109	57	29	23	109	117
9	66	19	12	3	34	122
10	123	87	42	35	164	143
11	98	23	19	4	51	132
12	96	54	28	31	113	131
13	100	39	26	25	90	89
14	95	40	27	21	88	133
15	121	63	30	32	125	124
16	98	74	34	31	139	131
17	80	65	30	26	121	142
18	85	17	13	2	32	134
19	103	34	23	15	72	93
20	116	55	31	15	101	112
21	96	57	30	19	106	125
22	103	37	24	11	72	159
23	85	52	27	30	109	139
24	100	60	27	20	107	127
25	84	38	25	26	89	166
26	90	61	34	37	132	164
27	94	43	24	18	85	128
28	104	49	23	28	100	135
29	110	51	29	30	110	118
30	150	60	31	31	122	116
31	90	39	24	19	82	132
32	80	26	24	13	57	129
33	97	35	18	11	69	139
34	101	45	23	24	96	140
35	104	53	28	38	119	145
36	115	41	23	20	84	161
37	98	64	34	37	135	147
38	100	68	36	32	136	124
39	119	55	33	31	119	85
40	92	65	28	38	131	163
41	91	35	16	14	65	154
42	71	29	15	7	51	115
43	90	105	49	60	214	162
44	123	63	37	42	142	115
45	125	82	38	47	167	143

Subject	I.Q.	Fluency	Flexibility	Originality	Total Creativity	Prejudice
46	122	89	42	45	176	140
47	93	87	37	42	166	121
48	122	98	53	65	216	104
49	89	73	35	29	137	123
50	89	78	46	40	164	123